

Overview

Brazil has a large and diversified economy that offers US companies many opportunities to export their goods and services. As Brazil's largest single trading partner, the US enjoys a strong reputation in a variety of sectors. This report is one of a series that is published by the US Commercial Service's team of sector experts throughout the year. If you do not see an opportunity for your product here, please check out our other reports at www.buyusa.gov/brazil and consider contacting us directly to find out if we can help you export to Brazil.

Infrastructure Forecast

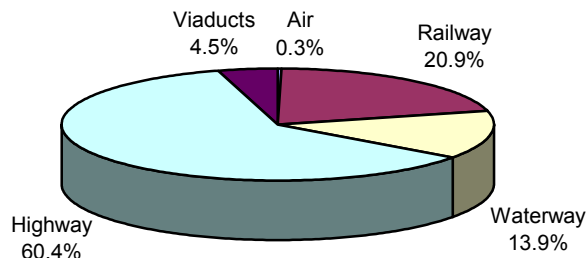
Global economic forecasts indicate that trade between North America and Latin America will increase significantly in coming years. Trade in goods is expected to more than double, from 260 million tons to 560 million tons, by 2020. Coordinated policies to promote efficient and secure hemispheric trade transport will be needed to accommodate this growth. These policies must consider many factors, including the degree of national infrastructure development, intermodal system connectivity, technology deployment, institutional arrangements to support trade transport development, and effective cargo and vessel security systems.

The structural bottleneck in Brazil's transportation sector is considerable—it is a drag on GDP growth and adds to what's known as the "Custo Brasil": the cost of doing business in Brazil. According to the World Trade Organization statistics for 2003, Brazilian exports accounted for one percent of world trade in goods, while Belgium had a three percent share. Currently, Brazil's infrastructure could not accommodate a significant increase in exports, because existing modes of transportation are already operating close to their capacities.

Investment in the Brazilian infrastructure is both inevitable and crucial as the country endeavors to expand its share of global export transactions. In 2004, Brazil set a new record for its exports, with approximately US\$100 billion in sales of soybeans, iron, meat, maize, tobacco, sugar, airplanes, automobiles, footwear and several other products. The government expects a 5 percent growth in exports in 2005. The official export forecast for 2006 is US\$100 billion.

In the Brazilian government's Bi-Annual Investment Plan (2000-2003), allocated investment resources for transportation infrastructure were US\$13.3 billion. European companies are poised to capture a large share of the proposed investments by offering package deals that include long-term financing. Unfortunately, US companies are not taking full advantage of alternative financing sources offered by the government, particularly by Ex-Im Bank (www.exim.gov), which could greatly increase their chances of selling U.S. made products.

Brazilian Transportation: 2003



Source: GEIPOP – Brazilian National Department of Transit

The government's Public Private Partnership (PPP) project will undoubtedly alleviate some of the pressure for government expenditure enabling the private sector to participate in those investments that are required in order to lessen existing bottlenecks and improve system efficiency

Brazil's public and private investment in infrastructure has fallen from about 7 percent of GDP in the 1970s to 1.5 percent in 2003. This was the result of fiscal policy objectives that necessitated drastic cuts in public spending. While public infrastructure investment was decimated, the government failed to establish an appropriate climate for private investment. The government's need to run primary surpluses in order to comply with IMF guidelines is seriously limiting its capacity to finance projects that are strategically important for the country's development.

In spite of the broad privatization program of the 1990s, private investment in infrastructure remains at about one percent of GDP. As a result of increasingly low levels of investments, Brazil has lost ground, in terms of quantity and quality of infrastructure, to its East-Asian competitor China and India. The current administration wishes to remedy this disparity by raising the level of private infrastructure investment to at least 3 percent of GDP.

Recent research shows that infrastructure investments in Brazil should be substantially increased to enable the economic growth and job creation needed to reduce poverty and to improve living standards. Some have estimated that infrastructure investments in Brazil would have to reach about 5 percent of GDP to maximize the impact of economic growth. This is similar to the conclusions reached by other developing countries. Different sources estimate that US\$20 billion in annual investment over the next few years would be necessary in order to gradually eliminate the existing bottlenecks in the Brazilian economy.

Public Investment

Currently, there are two ways the Brazilian government solicits public investments. The first one is by public auction - the government contracts and pays for work performed. The second one is by concessions - the public sector transfers public property to a private enterprise, which assumes the responsibility of investing in it in accordance with rules and regulations settled in contract. A return on these investments must be attained solely through the management of the enterprise, by means of toll collection, tariffs, etc.

Concessions prioritize activities whose cash flow can guarantee the amortization and the remuneration of the applied resources. One drawback could be the absence of immediate return on investment, even if prospects for medium and long-term returns are good.

The Public Private Partnership (PPP) law announced recently by the government proposes to fill this gap. Contracts of up to 30 years would allow private companies to obtain, totally or partially, the necessary resources for the execution of a project. The public sector would provide an immediate return on investment by guaranteeing a minimum yield to the business; something forbidden by the current law of concessions today.

The project also supplies parameters for case-by-case definition for payment model and guarantees. The government hopes that the PPP will attract R\$36 billion (US\$13.3 billion) by the year 2007. In spite of this new model and the effort set forward, the regulatory environment of the countless activities that might be involved in the PPP process plays a crucial role for the success of the partnerships.

The Logistics of Transportation in Brazil

The Brazilian agricultural sector faces a special challenge in its need to transport large volumes of low-value cargo across long distances. Brazil's high transportation costs and port fees can quickly eat away at agricultural margins. In 1995 for example, shipping a ton of soy from New Orleans cost just US\$3.00 whereas the cost to ship the same product from the Brazilian port of Paranaguá exceeded US\$14.00. The average cost to transport the product between the production regions of the US and the port of New Orleans by waterways (an average of 2,000km) was just US\$16.00 per ton. In Brazil, this cost exceeded US\$80.00 per ton for the same distance due to poor infrastructure conditions. That year, in order to overcome this problem, the Federal Government began to encourage the development of multimodal transportation corridors based on the use of waterways. It also began privatization programs for railroads and ports.

Despite environmental delays in the construction of certain waterways such as the Araguaia-Tocantins and the Tietê-Paraná, the implementation of multimodal transportation corridors and the privatization of railroads and ports have jointly been responsible for a 40 percent reduction in the cost of grain transportation and a 50 percent reduction in port fees.

In February 1993, the Port Modernization Law (Law 8,630/93) privatized the management, but not the ownership, of Brazil's ports. Since its enactment, more than 100 concessions for private and hybrid terminals have been granted. The government has accelerated concessions of private terminals in Brazil's main outlet ports and has embarked on a process of rationalization of the management of port labor—one of the lobbies responsible for the high port charges.

Considering the prospects for the expansion of agricultural borders, existing trade flows of production, and the main consumer markets (including potential markets), the Brazilian government has decided to concentrate on five principal corridors: the Northwest, the Central-North, the Northeast, the Central-East, and the Southeast.

The Northwest Corridor

The Northwest Corridor covers an arable land estimated at over 16 million hectares located north of the state of Mato Grosso and east of the state of Rondônia. The main modes of transportation in the region are rivers and roads. The first route, between the junction of roads BR 364 and 235 and the city of Porto Velho follows road 364. The second route, between Porto Velho and the port of Itacoatiara (in the state of Amazonas), follows the Madeira River for 1,115 km. Between Itacoatiara and the Atlantic Ocean, the route runs along the Amazon River. This corridor mostly serves the pre-Amazon region comprised of the Parecis Plateau in the states of Mato Grosso and Rondônia, the cerrado area adjacent to federal road 364, which connects Cuiabá (the state capital of Mato Grosso) to Rio Branco (the state capital of Acre) going through Porto Velho (the state capital of Rondônia), and areas bordering the Madeira River. Another outflow alternative would be road BR 363 connecting Cuiabá to Santarém, in the Amazon River.

The Central-North Corridor

In the Central-North Corridor the main routes are: 1,230 km of navigable waters in the Araguaia River; 420 km of navigable waters in the Mortes River (located in the state of Mato Grosso); 420 km of navigable waters in the Tocantins River; a 1,500 km-long area on road BR-010 (connecting Belém to Brasília); a 230 km-long area in the North-South Railroad; and a 600 km-long area in the Carajás Railroad between Açailândia (in the state of Maranhão) and the Port of Ponta da Madeira in São Luís (the state capital of Maranhão).

It is important to emphasize that part of this corridor, on the route located between Estreito (Maranhão) and São Luís may be used as outflow for grains originating in the production regions of southern Maranhão and in the state of Piauí. The Central-North corridor therefore comprises a huge area of the Cerrados region, which covers over 20 million hectares in the states of Tocantins (47 percent), Goiás (20 percent), Mato Grosso (15 percent), Pará (7 percent), Maranhão (6 percent), Bahia (3 percent), and Piauí (2 percent).

The Northeast Corridor

The Northeast Corridor covers all the regions located north of the state of Minas Gerais, as well as in the states of Bahia and Pernambuco. The Corridor is formed by the navigable area of the São Francisco River between the towns of Pirapora and Petrolina (Pernambuco), and by the road network extending

from Petrolina to the main capitals and ports of the northeast. It also enables a railroad connection between Petrolina and the ports located in the states of Pernambuco and Paraíba.

The Central-East Corridor

The production of the northwestern portion of the state of Minas Gerais and the central portion of the state of Goiás (an area of approximately 1.5 million hectares) flows through the Central-East Corridor. It uses the Vitória-Minas Railroad (owned by the Vale do Rio Doce Company) between the Port of Tubarão and the city of Belo Horizonte, as well as a railroad line to be built connecting Belo Horizonte to Pirapora (Minas Gerais) and on to Unai (Minas Gerais).

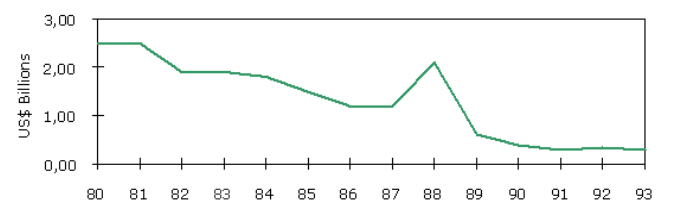
The Southeast Corridor

The Southeast Corridor comprises the Tietê-Paraná Waterway and enables the flow of the production from the states of Mato Grosso do Sul and São Paulo to the main exporting ports located on the mouth of the Prata River. This corridor has a strong interface with the transportation system of the southeastern region. The construction of the Jupia dam extended the waterway by 700 km, and connected São Paulo and Foz do Iguaçu (in the state of Paraná) and, therefore, between São Paulo and the exporting ports of the Prata River and the country's central-western region. The construction of the waterway enabled the interconnection between the northern and southern portions of the Paraná River, which, together with the Prata and Paraguai, made possible the use of barges along 7,700 km of waterways.

Highway Sector – Overview

Brazil has roughly 1.5 million km's of highways making it the 12th largest road system in the world. However, only slightly more than 10 percent of the system is paved. An ongoing privatization program is gradually bringing investment to the main cargo and passenger highway routes, with substantial upgrading of service quality.

Investment in State Road System



Source: CNI

Brazil's transportation sector moves around US\$25 billion in cargo per year, accounting for 4.4 percent of GDP, and is responsible for 1.2 million direct jobs. It currently handles 750 billion tons/km of freight per year, and 890 billion passengers/km. Brazil has roughly 1.5 million km of highways making it the 12th largest road system in the world. However, only slightly more than 10 percent of highways are paved. Highway transportation dominates Brazil's infrastructure, accounting for 75 percent of the country's cargo. However, of

the 32 million vehicles that travel on Brazil's roads, only 2 million are trucks—with an average age of 18 years.

The trucking industry dominates both the short and the long distance freight markets despite an average unit cost 3 times that of rail and water transport. These high costs have a detrimental impact on interregional trade, particularly for peripheral states as over 80 percent of interstate trade volume takes place in the eastern seaboard corridor. These high costs also harm the country's competitiveness, real household income, and consumption. In fact, the costs of road transport have been estimated to exceed the costs of the rail or waterborne multi-modal transport alternatives by as much as US\$2.5 billion annually. Other options, however, for the most part are non-existent; the infrastructure is simply not developed. Public policy reforms are in process to aid in making these alternatives more feasible.

Excluding waterways, rivers, and coastal shipping, 75 percent of the country's cargo is transported on highways, suggesting substantial inefficiencies, although railroads are gradually winning back heavy, long-distance freight.

The Brazilian government plans to continue its highway privatization program opening up new opportunities for direct and indirect investments. It plans to privatize an additional 10,000 kms of federal highways, turn over 13,000 kms to state control, and rebuild 14,000 kms of federal highways by 2007.

Highway Sector – Challenges

In accordance with the National Confederation of Transport's (CNT) report on the situation of the 74,681 km of Brazilian highways, 75 percent of roads researched are in poor, bad or dreadful condition. The situation is worse in highways under federal or state administration, where this percentage goes up to 83 percent. The highways that have been contracted to private enterprises are in much better condition. The private companies are responsible for the road maintenance, whether charging tolls or not. The ten best stretches of highways investigated by the CNT are under private sector responsibility and are concentrated in the State of São Paulo. The worst ten are under state or federal administration and most of them are in the northern and northeastern part of the country.

It is well known that the dilapidation of the Brazilian road system increases the number of accidents and travel time, while hindering the expansion of the Brazilian economy. The National Confederation of Industry (CNI) confirmed that many entrepreneurs are paying more to use other means to transport their products such as air cargo to fulfill delivery schedules with international buyers. In some cases, the profit margin is reduced to almost zero, compromising future business.

The condition of the roads leads to increased transportation costs. On Federal paved highways alone, which includes most of Brazil's important export/import corridors, vehicle operation costs are estimated at US\$20 billion per year. As a result of a series of necessary fiscal adjustments, the condition of federal paved highways has gradually deteriorated since the beginning of the 1990s, and increasingly so over the 1999-2003 period. Predictably, this has resulted in increased trucking costs and

rates, as well as much higher risk of breakdowns, accidents, and cargo thefts. As of today, only about 25 percent of the road network is in good condition. This translates into 20 percent higher vehicle operation costs, and road rehabilitation costs which are 3 to 7 times higher than periodic maintenance costs.

In spite of recent legislation, multimodal transport is not significantly developed, which harms Brazil's competitiveness. The federal government's multi-year plan (Plano Pluri Anual, PPA) includes a number of programs and projects which address network connectivity problems, but most still need adequate economic and financial feasibility studies to make them attractive to private financing.

Highway Sector – Investment

Brazilian federal, state, and municipal privatization programs have granted 39 concessions with an average lifespan of 20 years and a total investment commitment of US\$6 billion. In this first stage some 10,000 kilometers of federal and state roads were turned over to private operators. Private companies operated 39 highway concessions and invested US\$700 million through 2000. This makes up just 12 percent of the planned investment before the end of the concessions. Privatized highways are now safer and offer more service to users. They have repaved long stretches of highways and renovated traffic signals. Operators aim to incorporate modern technology into the network system, to reach Europe and U.S. interstate highway benchmarks.

So far, the highway privatization program is aimed at roughly 6 percent of the 164,000 kilometers of paved roads, and concession auctions have been held for less than half of the planned number. Companies operating the privatized highways are expected to invest US\$5.3 billion on road improvements over the next two decades. Many opportunities are foreseen as new highway sections are tendered.

Bidding for the two most valuable segments of the Highway Concession Program will take place in accordance with the criteria of the lowest toll combined with the greatest value to be paid to the federal government by the concessionaire over a 25-year period.

According to the schedule laid out by the Ministry of Transportation, the invitations for bids will be published in June 2005, the auction should take place between August and September, and the contracts will be signed in October. In addition to Brazilian companies, American, Portuguese, Spanish and African companies have also expressed interest in competing for the 3,059 kilometers, which will be transferred to the private sector and will require around \$5 billion of investments.

Ministry of Transport executive-secretary Paulo Sérgio Oliveira said the selection of the companies, consortiums or specific purpose societies (SPE) accredited to participate in the bidding will take place in two stages. In the first stage, the government will announce the reference value for the toll by means of an auction and the winning company, consortium, or SPE will be the one presenting the best value to be paid to the federal

government for the concession combined with the lowest value to be charged from the user of the concession. The government hopes to receive the payments three years after signing the contracts.

The Ministry of Transportation concessions director Fábio Duarte commented that an average of 24 bids per lot of highway concession are expected. On the other hand, he and executive-secretary Oliveira said they have no reference regarding the total that the government can collect with payments on the concessions. "There is no sale or alienation of assets, so there is no way to fix values," said Duarte.

Considered the most valorized segments of the Highways Concessions Program, the seven lots, which are planned to be auctioned this year, also include the Mercosur corridor. To be offered in this stage are these following segments:

- BR-153/SP (the stretch from MG/SP border to SP/PR border – 322 kilometers long);
- BR-116/PR/SC (Curitiba to SC/RS border – 413 km);
- BR-393/RJ (from MG/RJ border to the junction with BR-116 (Via Dutra) – 200 km);
- BR-101/RJ (from RJ/ES border to Presidente Costa e Silva bridge – 321 km extension);
- BR-381/SP boarder (Fernão Dias highway) – 200 km,
- Belo Horizonte to São Paulo BR-116/SP/PR (the stretch from São Paulo-Curitiba – 402 km);
- BR-116/PR; BR- 376/PR; BR-101/SC (stretch Curitiba - Florianópolis – 382 km).

This round's concession model would include obligatory guarantees on the part of the private sector in the form of bid and performance bonds. It would also include annual performance reviews. Further, toll rates will be adjusted annually according to inflation; in the past, toll rates were based on various factors such as the price of supplies used in carrying out works. The inflation-indexed tolls are meant to increase transparency for the user.

Pension funds will also be allowed to bid on the contracts. As a way of increasing society's participation in the toll roads, the operators will have to issue shares in five years. The new concessionaires will be required to enhance the users' safety and comfort levels. This will bring excellent opportunities for U.S. suppliers of intelligent transportation systems (ITS) such as:

- call boxes,
- variable message sign network,
- fixed and mobile telecommunication network,
- toll control & collection systems,
- weighing stations,
- traffic monitoring systems,
- cameras & radars, and
- CCTVs.

Another trend that U.S. companies should examine is Banks entering into highway cooperation agreements. Brazilian bank Banco do Brasil and the Mato Grosso state government have signed an agreement to improve state highways. The 300mn-

real (US\$111 million) agreement will go to the "Programa BB CPR Estradas" program that aims to recover roads considered vital to the transport of agricultural goods. Under the three-year program (2004-2006), close to 3,000km of road will be built and recovered via agreements with farmers. To date, 17 agreements with farmers have been signed resulting in the paving of 802km.

US subcontractors and suppliers may have the opportunity to gain more second-order business in Brazil as the country strives to attract large-scale investment in its road infrastructure. For an overview of the current best prospects in highways, please refer to our Top Prospects Report on this sector in our Country Commercial Guide at www.focusbrazil.org.br/ccg.

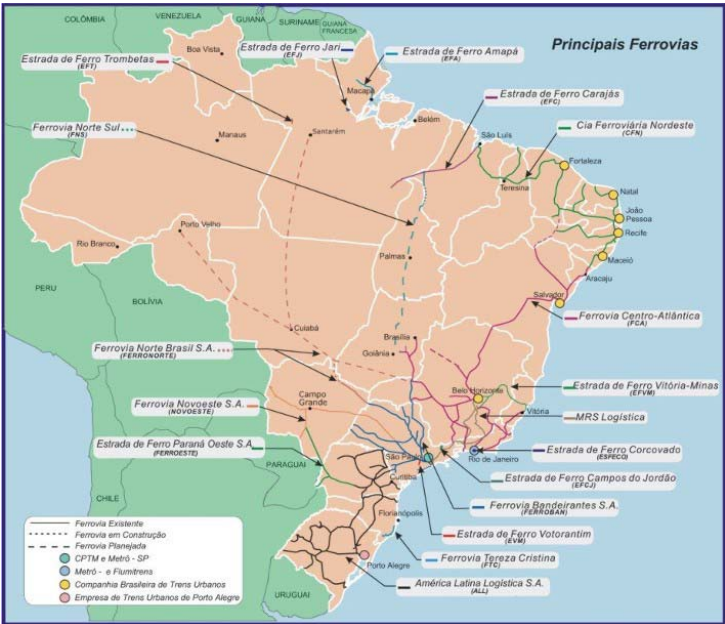
US companies interested in direct investment in Brazil's concessions and proposed Public-Private Partnerships are urged to use considerable caution. The guarantees that the Government of Brazil has discussed using to minimize investor risk have not been fully defined, much less fully funded. Recent investor experience in public concessions at both the state and federal levels has been disappointing in some sectors, as contracts have been contested by state and federal entities in local courts.

Railway Sector – Overview

The Brazilian Railroad sector achieved considerable growth in 2004, and the Brazilian network is expected to show a 25 percent growth in production by 2008. Brazilians favor purchasing railroad equipment from US manufactures; consequently the increase in business activities in Brazil represent more business for US manufactures.

The executive secretary of the Ministry of the Transportation, Mr. Paulo Sergio Oliveira Passos, stated that he expects that this year's growth of the railroad sector will surpass the economy in general and it will have to be even bigger in the coming years. Mr. Francisco Oliveira Filho, director of the Brazilian Railroad Association (ANTT), said that rail cargo transportation grew 16 percent in the first semester of this year and that "the Brazilian network will show a 25 percent growth in the production by 2008". This projection is based on the volume of funds obtained in 2004 (close to R\$2.5 billion, or US\$1 billion) and on this year's investment between January and July, which totaled R\$813 million (US\$325 million) – a growth of 76 percent in relation to 2003.

Mr. Jurandir Fernandes, the Secretary of Transportation for the São Paulo metropolitan area, said that a great deal of effort is being applied to restart the passengers train segment in that State. According to him, since 1995 they have invested in 21 new passenger stations in the State. He emphasized that presently they are currently building 13 kilometers of the Line 4 metro, 5 kilometers of the Line 2 metro, the Grajaú branch on the South side of the city, and four additional stations close to the University of São Paulo (USP).



After the rail sector privatization in the late 1990's, freight shipment by rail increased 20 percent on average, billings increased 75 percent, and more than US\$500 million was invested in the recuperation of permanent way and the refurbishing and purchasing of rolling stock.

The type of freight being shipped is changing. Now food and beverage pallets, containers, paper and pulp and even automobiles are being shipped by rail. In order to achieve this, new specialized rolling stock was purchased and terminals were improved. Nonetheless, after privatization the rail network has shortened since some areas were considered non-profitable.

Railway Sector – Challenges

Railroads carry only 24 percent of Brazilian cargo, with 29,798 km of tracks. In addition to expansion, the rail network desperately needs improvements, modernization and upgrades, to increase train speed.

The sector, recently privatized, has some structural difficulties that affect its development. For example, its short network extension, lack of maintenance, high costs, and the unregulated system are some of these difficulties.

The transport supply of the railroad system in Brazil is extremely low when compared to international standards. It is equivalent to 55 percent of the China supply, 40 percent of the Canadian supply, 32 percent of the Mexican supply, and 12 percent of the U.S supply (km of railroad per km² of territorial extension). The private sector owns 28,671 kms of the total extension.

The financing cost for the railroads in Brazil is around 15 percent per year (BNDES's financing), in the U.S this cost is around 6.5 percent. The exchange rate is considered another

problem since most of the investments are made through foreign investment.

In addition, historical reasons explain the lack of standardization and integration of the Brazilian railroad system. Brazil's railways were originally constructed to run short distances linking specific production areas to ports, with no plans to create a standardized national railway system. As a result of this unplanned development, Brazil now has short stretches of railway that utilize different standard for the width of the track. To move goods any significant distance, rail operators need to stop their trains and retrofit the cars to operate on different tracks. This reality has proved a major hindrance to the Brazil's railroad sector growth. According to the Centro de Estudos em Logística (Logistics Studies Center) of the Federal University of Rio de Janeiro, it can take up to 10 hours to prepare a train to operate on different tracks.

Railway Sector – Investment

We expect to see an increased focus on expansion and modernization of the railroad infrastructure in Brazil in the coming years. Brazil has traditionally relied less on railroads for the transport of freight and passengers than most other countries. However, a newfound determination to develop the interior, the fact that certain agricultural products and commodities are best transported by rail, and recent political interest in improving railroads are good indications for increased investment in this sector.

Opportunities for direct export to Brazil include both new and reconditioned equipment. Opportunities also exist for foreign direct investment in railroads, equipment, and logistics services.

Private consortiums, which include a number of US participants, have invested US\$2.5 billion in Brazilian concessions. Noel Group, Brazil Rail Partners, Railtex International Holding, Ralph Partners, and BankBoston are some of the US groups participating in these concessions. US suppliers are expected to capture 25 percent of the market, as there is a local preference for US technology and products.

Railroad companies are focusing their investments on important export corridors; particularly the Mercosul corridor but also corridors to other non-Mercosul neighboring countries. In the North and Northeast, for example, integration and improvement of regional systems is the primary focus of investment.

According to sector analysts, investment in the railroad industry will remain strong for the next few years. Railroad companies published estimates indicating that over US\$416 million was invested in 2001, an increase of 56 percent over the previous year. Ferronorte, a large investor, had a US\$98 million loan approved in 2001, by the Brazilian Development Bank (BNDES). These funds were dedicated to finance the second stage of the Alto Taquaril project, in the state of Mato Grosso (MT).

The Ministry of Transportation has concluded a project to revitalize Brazil's railways that includes investments of R\$10.5

billion. The project divides Brazil's rail network into sections, the first and most critical section has a budget of R\$2.7 billion and was scheduled to be finalized by June 2004. The second section has a budget of R\$2.5 billion. The project is waiting for the PPPs to be finalized so that this phase can be begin. The first two sections should be finalized by 2007. The final phase, with projected investments of R\$5.3 billion, will be discussed in 2007. In total, the plan is expected to create approximately 302,000 jobs.

According to the Ministry of Transportation, China is willing to invest up to US\$10 billion in Brazilian railways, highways and ports. The Ministry reports that China wants Brazil to continue to supply soybeans and other agricultural products at competitive prices.

Brazil's private railroad operators also plan to invest millions of dollars in a number of activities including the following:

- Purchase and refurbishment of locomotives,
- Purchase of locomotive spare parts, braking systems, couplings, diesel engine parts, communication systems, signaling systems, track maintenance equipment and services, railroad ties of concrete and wood,
- Remodeling, duplicating and electrifying 3,300 km of railroad tracks, replacing rails and ties, and enlarging and remodeling maintenance facilities.



Source: Ministério de Transporte

CVRD (Companhia Vale do Rio Doce), Brazil's largest mining firm, is planning on spending US\$274 million on its railroad company, Vitoria a Minas (EFVM). US\$227 million will be used to acquire and rebuild locomotives and railroad cars. The remaining US\$47 million will be used to buy light equipment and to expand and upgrade their tracks. In addition, 46 railroad cars will be purchased or re-built.

EFVM reported that shipment of iron ore and pig iron has increased considerably in the past years and noted that CVRD's transportation of other cargo grew 40 percent in 2004. However, the real growth for this sort of cargo is likely to increase more dramatically after 2004. The company will keep investing in locomotives and rail cars. Some of the rail cars are purchased from domestic suppliers but the locomotives are imported. Brazilian rail car manufacturers have backlog orders to keep them operating at capacity for the next 13 months. Amsted-Maxion from the state of São Paulo, for example, is

manufacturing 1,682 railroad cars for CVRD subsidiaries Ferrovia Centro Atlantico, Ferrovia Carajas and Vitoria Minas.

During the first nine months of 2004, Brazilian railroad operator America Latina Logistica (ALL) posted a US\$35.5 million consolidated net profit. The company's net profit increased from US\$2.1 million in 2003 to US\$40 million in 2004, due to the company's growth in transported volume, particularly agricultural commodities and industrial products. Investment in the period reached US\$47 million, up 109 percent from the same nine-month period in 2003.

ALL is a major logistics company in Brazil and Argentina that operates 584 locomotives and 11,000 rail cars on more than 10,000 miles of rail network. Recently, ALL signed an agreement with Bunge Alimentos to transport 270 million tons of grain and processed food over the next 23 years. The agreement provides that Bunge will add 650 new rail cars to ALL's fleet in the next five years.

Recently the concessionaires of the Brazilian railroad sector asked for investments from the Federal government. US\$1.4 billion would be used to solve problems concerning the network's bottlenecks, increase train speed (currently, the train speed is around 20km/h) and the systems productivity. During the first eight years of concession, private companies invested US\$2.2 billion to improve the network. US\$2.4 billion is expected to be invested from 2005 to 2010 to reform the network and to purchase locomotives and rail cars, as to implement new technology and capacity training. All these investments are necessary since the production of iron products is estimated to increase by 40 percent and the production of grain and fertilizers, by 22 percent.

Private Investments in Railroads: US\$ per Km of Road

	Reform	Enlargement	Implementation	Total
Railroads	\$1309	\$507	\$2171	\$3,987
Highways	\$1746	\$4503	\$74	\$6,323
				\$10,310

Sources: CVM; Ministry of Transport; AAR - Association of American Railroad; Análise CEL/Copead

Another interesting opportunity is the Transnordestina railway, which the government expects to open for bidding in by mid-2005. The railway would span Brazil's Pernambuco, Piauí, Maranhão and Ceará states.

In August, the respective state's governors approved the new rail project - whose price estimates range from US\$500 million to US\$1 billion - following the previous month's unveiling by rail operator Companhia Ferroviaria do Nordeste (CFN). The new project aims to integrate grain-producing areas in Maranhão and Piauí with the ports of Pecém in Ceará and Suape in Pernambuco.

According to DNIT (Brazilian National Transit Department) Public funds will finance the bulk of the project. Currently, financing is being sought from the country's national development bank BNDES, the northeast investment fund (Finor) and the northeast development fund (FDNE).

The 2,070km line will have 36 stations, the capacity to move 30 million tons per year of cargo as well as some 2.5 million passengers per year.

Airport Sector – Overview

Over 90 percent of the airports in Brazil are managed by INFRAERO (Empresa Brasileira de Infra-Estrutura Aeroportuária). This public institution is responsible for designing, building, operating, and managing, 66 airports and 81 navigation support stations (all of which have air traffic control, telecommunications services, flight protection systems and services) as well as 32 terminals responsible for handling cargo logistics. INFRAERO has begun to integrate and improve Brazil's airport system and in 2000 started work on a number of important airport modernization projects. These projects offer attractive long-term market prospects for US manufacturers of airport equipment. INFRAERO is headquartered in Brasília and has seven regional business centers located in Belém, Brasília, Manaus, Porto Alegre, Recife, Rio de Janeiro, and São Paulo.

INFRAERO provides airlines with the necessary services for their planes, flight crews, passengers and ground crews. It has also implemented and developed automatic system integrated with SISO and its principle modules: SIV, SMAP, SIMS-RPE, and SPAR. All airports under INFRAERO management are equipped with video monitoring of all airport environment and X-ray equipment for luggage.

In 2004, INFRAERO registered record growth in air cargo imports and exports. Imports increased about 30 percent and exports increased 25 percent compared with 2003. Currently, air cargo revenues alone account for 26 percent of INFRAERO's total revenues.

INFRAERO's cargo facilities are installed in 32 airports and include a total area of approximately 260.000 M² with modern infrastructure and state-of-the-art equipment including frigorific cameras, special areas for radioactive material, chemical products, installations for live cargo, trans-elevators, coffers, and areas for restricted cargo.

Airport Sector – Challenges

Brazilian government procurement Law 8666 applies to INFRAERO tenders. Under this law, price is to be the determining factor in selecting suppliers, i.e., the bid with the lowest price becomes the provisional winner. The Brazilian government may not make a distinction between domestic and foreign-owned companies. While most government procurement processes are open to international competition, either through direct bidding, consortia or imports, many of the larger bids (e.g. airport construction) become very political and are done through sole sourcing or national security arrangements that exclude competition. This kind of purchasing often requires an act of Congress, which can be difficult and time consuming.

In general, foreign companies that win INFRAERO bids are usually associated with a local firm. In the case of international bids to supply goods and services or specific government projects, successful bidders are required to have local representation -- i.e., legal presence in Brazil. Since the open period for bidding is often as short as one month, it is advisable to have a partner resident in Brazil who is able to act on tenders as soon as they are announced.

Airport Sector – Investment

Brazil's investment in airports varies widely from year to year, as major projects are taken on and procurement tends to be of big-ticket items. 2005 promises to be an extraordinary year, however, with a total projected increase in expenditures of some US\$15 billion, most of which needs to be imported. INFRAERO's estimates tend to be highly credible, since its funding pool for such projects is self-generating.

As an example, 2003 was an atypical year because INFRAERO imported high value equipment from Spain (passenger bridges - total value US\$2 billion). Imports from US increased around 20 percent from 2003 to 2004. The primary equipment imported from US in 2004 was parts and components for maintenance services. In 2004 INFRAERO also imported parts for the TA 10K radar system, VHF-AM Integrated Station supplies, radio beams, and hydrogen generators from France, England, Canada, and Uruguay respectively.

In 2005, INFRAERO plans to make substantial purchases of high-value equipment. Projects for 2005 include a new airport for the city of Florianopolis, as well as converting domestic airports into international airports, such as the airports in Piaui and Rio Grande do Sul. Therefore, Brazil will also have to invest in major security equipment, air navigation systems, and telecommunication systems.

There is some basis for believing that US exporters have an exceptional opportunity in 2005. That is because INFRAERO made similar procurements, on the order of US\$20 billion, in 2002. This equipment was primarily for fire control and included a single purchase of fire combat equipment that totaled over US\$5 billion.

Some of INFRAERO's airport projects will be made in conjunction with state governments as well as with private sector corporations. All airport construction projects are being contracted by INFRAERO through public auction. The winning contractor will then choose subcontractors to participate in the project.

The following products represent the best prospects for US firms exporting to Brazil:

- Passenger bridges
- Firefighting trucks
- Metal detectors
- Electronic sniffers
- Baggage X-ray inspectors
- Radars, and parts for radar maintenance

Brazilian Airport Market 2003-2005

US\$millions	2003	2004 est*	2005 est*
Market Size	\$3,911	\$1,444	\$16,438
Local Production	\$280	\$336	\$403
Exports	\$240	\$288	\$345
Imports (Global)	\$3,047	\$411	\$15,200
Imports from US	\$343	\$409	\$5,000*

Exchange rate of R\$2.96/US\$1.00

Statistical data are unofficial estimates from trade sources

*2004/2005 figures are estimates – 2005 US market share highly variable

Major investments continue to be scheduled for São Paulo's International and domestic airports in Recife, Maceio, Brasília and Rio de Janeiro (Santos Dumont).

The project at São Paulo International Airport (Guarulhos) includes the construction of a new terminal and runway. The estimated cost of this project is US\$549 million and project completion is scheduled for 2007.

The following is a list of INFRAERO's current and future projects:

Currently Under Construction

Brasília International Airport

Construction of 3.300m landing strip.
Completion Date: December 2005.

São Paulo International Airport (Congonhas)

2nd phase terminal remodel
Completion Date: April 2007.

Zumbi Dos Palmares International Airport (Maceió)

Construction of new passenger terminal. Runway expansion.
Completion Date: June 2005.

Guarapes International Airport (Recife)

Construction of new passenger terminal and garage.
Completion Date: December 2005.

Santos Dumont Airport (Rio de Janeiro)

Terminal and landing strip remodel
Completion Date: May 2007.

São Gonçaldo do Amarante Airport (Natal)

Construction of new airport.
Completion Date: March 2009.

Construction beginning in 2005**São Paulo International Airport (Guarulhos)**

New runway system, new draining system, new water/oil separator system.

Completion Date: December 2007.

Macapá International Airport

New passenger terminal.

Completion Date: June 2007.

Goiânia Airport

New passenger terminal system, new passenger terminal, parking.

Completion Date: 2nd Quarter 2007.

Bid currently under approval process.

Vitória Airport

New passenger terminal system, new passenger terminal, control tower, taxiways and support buildings.

Completion Date: January 2008.

Situação Atual: Ordem de serviço assinada em 29/12/2004

Future Construction – bidding open**São Paulo International Airport (Guarulhos)**

Construction of 3rd passenger terminal, landing area, garage.

Bidding process is open. Environmental licensing is in process with the Secretary of the Environment for the State of São Paulo.

Source: INFRAERO Annual Report 2004

US airport equipment firms primarily compete with companies from Finland, Spain, France and Germany. Due to the competitive nature of the market and the high cost of capital in Brazil, firms providing the most attractive financing arrangements will generally be the most competitive.

Given the fact that most of the first-order procurement will be done through Government of Brazil's formal bidding procedures, we particularly urge US suppliers to contact us early to find out about timing, strategy, and levels of assistance that we can offer.

Air Cargo Projects

In 2004, INFRAERO invested approximately R\$35 million (US\$13 million) in equipment and systems for several cargo terminals. For 2005, INFRAERO foresees more investments as they look to new markets such as China and Japan. According to INFRAERO's Superintendent of Cargo Logistics, Luiz Gustavo Schild, INFRAERO signed a partnership agreement with the Chinese Government on the air cargo area to serve interior cities during the October 2004 Federal Government Trade Mission to China.

INFRAERO's investments in Air Cargo for 2005 are expected to include:

- Complete automation of Manaus air cargo terminal,
- Revitalization of Campinas and Guarulhos airport cargo system,
- Construction of a new cargo terminal in Porto Alegre,
- Conclusion of a new cargo terminal in Fortaleza,

- Inauguration of an exclusive terminal for exports in Rio de Janeiro.

Infraero Planned Distribution Center

In addition to air cargo projects, INFRAERO is investing in an international air cargo terminal at the Miami Airport. This will allow INFRAERO to build an international distribution center through which Brazilian exporters can deliver their products directly to their clients in the United States. This distribution center would also allow Brazilian Federal Customs to clear products imported from the United States to Brazil before the products have left the United States, providing savings in costs and time for importers and exporters.

Miami is the principal receiver and sender of cargo to Latin America, including Brazil. INFRAERO intends to launch an international public tender seeking to contract a company to design and develop a business model for its planned terminal in Miami. The total value of this tender is estimated at approximately US\$1.5 million dollars.

INFRAERO also plans to participate in international tenders to manage important airports in other Latin America countries.

Viracopos International Airport – Campinas

Viracopos operates as a huge wholesale airport with the capacity to move extremely large volume of air cargo. A second runway is under construction as well as a new express cargo terminal.

Viracopos is considered one of the best cargo terminals in Brazil. The airport has the country's only completely automated heavy storage and cargo conveyor belt system. In September 2004 the airport registered R\$160 million (US\$60 million) in revenue with imports and exports for the year. Approximately 10 percent of the whole country imports comes through Viracopos airport. There is a high-tech industrial pool in Campinas, including companies such as IBM, Lucent Technologies, Compaq and Hewlett-Packard (HP), using Viracopos airport to import components and export products.



Since 1995, INFRAERO has invested approximately R\$87 million (US\$33 million) on new installations and state-of-art equipment at Viracopos. In 2005 INFRAERO plans to expand the airport's trans-elevator system. The total value of the

project is estimated at US\$1,4 million. Over the next 5 years, INFRAERO foresees an investment of approximately R\$200 million (US\$76 million) at Viracopos.

Guarulhos International Airport – Sao Paulo

Guarulhos International airport is considered the largest airport in Latin America. Guarulhos receives approximately 500 flights daily from over 40 airlines. In 2003, it stored 75 million metric tons. The airport currently has systems in place to ensure cargo liberation in 48 hours. The airport also has an extensive perishables complex and can store cargo at temperatures as low as -15°C .

INFRAERO plans to refurbish and purchase a new trans-elevator system at Guarulhos. The total cost for this is estimated at R\$6 million (US\$2,3 million.)

Eduardo Gomes International Airport – Manaus

The third largest airport in Brazil largely services the 500 companies set up in the Manaus Free Trade Zone. Currently 12 airfreight companies operate in the region transporting 108 million tons per year.

On December 2004, INFRAERO inaugurated a new cargo terminal equipped with state-of-the-art automatic freight handling system in Manaus. With this investment, the airport can store up to 3,500 tons.

In 2004, the airport received an investment of R\$23 million (US\$10 million). In 2005, INFRAERO foresees an investment of US\$19 million for Eduardo Gomes airport new cargo terminal – TECA III. INFRAERO plans to open an international public tender to purchase a trans-elevator system, weighing machines, and track lines systems.

Galeão International Airport – Rio de Janeiro

Due to its new installations, the Galeão International Airport is considered one of the best-equipped airports in Brazil and Latin America. Galeão focuses on imports and receives all types of cargo.

In 2004, INFRAERO invested R\$290,000 to build a new storehouse for dangerous cargo, refurbish the imports warehouse and improve the acclimatization cargo terminal system.

In 2005, INFRAERO plans to build a new cargo terminal at Galeão International Airport to handle exports. Galeão will become a "free port" airport with a free port zone where companies can set up assembly facilities to import components and parts to assemble their products on site, and then export directly, free from tariffs. The objective is to have an industrial airport.

Other Cargo Terminal Investments

Besides the investments mentioned above, INFRAERO is also investing in Petrolina Airport, in Pernambuco in the northeast of Brazil. This region is the prime producer and exporter of fresh tropical fruits to Europe and United States. In 2004, the airport received an investment of R\$32 million for the construction of a new patio, runways, automation of refrigeration system, tunnels, and other property improvements.

The State Government together with INFRAERO is creating conditions to develop a high-tech industrial group in Petrolina, which because of its strategic location in the northeast region of Brazil, could become a cargo distribution center for export and import to Europe, and the United States. Industrial cooperation may also decrease the current prohibitive cost of fruit export.

INFRAERO PLANNED INVESTMENTS FOR 2005

Airport	Investment	US\$ million
Eduardo Gomes Manaus	Installation of trans-elevator system and other state-of-art equipment	\$4.6
Fortaleza, Ceara	Construction of a new cargo terminal	\$9.6
Galeão Rio de Janeiro	Refurbishment and initial operation of export cargo terminal	\$2.3
Guarulhos Sao Paulo	Refurbishment and purchase of new trans-elevator system for cargo up to 30 kg.	\$2.3
Porto Alegre Rio Grande do Sul	Construction of Cargo Terminal	\$23.0
Viracopos Campinas	Expansion of trans-elevators system	\$1.4

Source: INFRAERO. Exchange rate as of January 2005:
US\$1.00 = R\$2,60

Key Contacts

- For more information about export opportunities in this sector contact US Commercial Service Trade Specialist Júlio Siqueira at:
julio.siqueira@mail.doc.gov
- For a good overview of exporting to Brazil, please look at our US Country Commercial Guide to Brazil:
www.focusbrazil.org.br/ccg
- US Commercial Service in Brazil:
www.buyusa.gov/brazil
- For more reports on this sector in other countries, please visit Export.gov's site for US Commercial Service Market Research Worldwide:
<http://www.export.gov/marketresearch.html>
- Export-Import Bank of the United States:
www.exim.gov
- Brazilian Ministry of Planning, Budget and Management:
www.planejamento.gov.br
- INFRAERO:
<http://www.infraero.gov.br>
- Government of the State of Pará Web site for Tourism in Pará and Amazônia:
www.cdpara.pa.gov.br
- Brazilian Ministry of Foreign Relations:
www.mre.gov.br